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| 10/008,740 | 11/13/2001 | Ying Guo | 8988.3827 | 6041 |

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EXAMINER

EDWARDS, LAURA ESTELLE

| | |
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| ART UNIT | PAPER NUMBER |
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1734

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/008,740

Applicant(s)

GUO, YING

Examiner

Laura Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 8-13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Election/Restrictions

This application contains claims 8-13 drawn to an invention nonelected with traverse in the office action dated 2/24/04. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Claim Objections

Claims 4 and 5 are objected to because of the following informality: in claim 4, last line, "is" needs to be changed to --in--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, last line, "said filter screen and said distribution plates" lack antecedent basis.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-3, 6, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hills (US 5,344,297) in view of Werner et al (US 3,762,850).

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Hills teaches a spin pack assembly comprising a spinneret (15) for generating bicomponent filaments; at least one distribution plate (12, 13, 14) distributing a polymer and second polymer mounted on top of said spinneret; spin pack housing (11) including a first polymer inlet means (17) for admitting said first polymer under pressure in a molten state, a second inlet means (18) for admitting a second melted polymer, a first chamber (A) for receiving said polymer and a second independent chamber (B) for receiving said second polymer; a polymer filter screen (22, 23) provided in each chamber for filtering polymer, and wherein the spin pack housing is connected to the at least one distribution plate for receiving the first and second polymers independently (see Fig. 4). Hills fails to teach or suggest providing diversion means having a trapezoidal base mounted in each chamber. However, it was known in the art, at the time the invention was made, to provide a diverter means or flow guide element having a base with a trapezoidal face in a spin pack housing polymer chamber preceding the filter in the direction of flow of polymer in order to provide uniform polymer distribution and prevent stagnation or dead spaces in the chamber as evidenced by Werner et al (see col. 2, lines 68+ to col. 3, lines 1-7; col. 4, lines 32-37; and col. 5, lines 59-63). It would have been obvious to one of ordinary skill in the art to provide the diverter means or flow guide element, as taught by Werner et al, into the polymer chambers of Hills in order to provide uniform polymer distribution and prevent stagnation or dead spaces within each chamber.

With respect to claims 2 and 6, the diverter means as taught by Werner et al provides for uniform distribution of polymer from the chamber onto the filter and subsequent distribution plates such that one of ordinary skill in the art would expect maintenance of uniform pressure

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within spin pack assembly as defined by the combination above due to the inclusion of the flow guide in each chamber.

Allowable Subject Matter

Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 5 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 4 and 5 would be allowable because there is no teaching or suggestion in the prior art of a spin pack assembly for spunbond production for constructing spunbond fabrics and laminates composed of bicomponent filaments comprising the combination of a spinneret for generating bicomponent filaments; at least one distribution plate for distributing a first polymer and a second polymer mounted on top of the spinneret; a spin pack housing including a first independent chamber for receiving the first polymer and a second independent chamber for receiving the second polymer; first polymer diversion block having a trapezoidal base mounted in the first chamber to provide first polymer diversion along and within the first polymer chamber; and second polymer diversion block having a trapezoidal base mounted in the spin pack second chamber for providing diversion along the second chamber of the second polymer,

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the spin pack housing being connected to the at least one distribution plate for receiving the first polymer and the second polymer independently wherein the first polymer diversion block for diversion of the first polymer in the first spin pack housing chamber and the second polymer diversion block in the second spin pack chamber each includes a block that is rigid and occupies a significant amount of volume in the first chamber and the second chamber, the block having a flat upper surface and a trapezoidally shaped bottom surface, the block being sized in length to occupy a substantial portion of the spin pack assembly first chamber and second chamber length, and being sized in width to allow spacing on each side of the block to permit the first polymer and second polymer to flow over and along the sides of the block, and the block having a base portion that is substantially trapezoidally shaped to allow the flow of polymer around the base of the block for uniform distribution of the first polymer in the first chamber and the second polymer in the second chamber.

Response to Arguments

Applicant's arguments filed 10/14/04 have been fully considered but they are not persuasive.

Applicant contends that Werner et al do not teach or suggest the claimed invention because Hill teaches a flow guide element (6) triangular in cross section and supported on three legs while Applicant's diversion block or flow guide element is rectangular on the top half and trapezoidally shaped on the bottom half.

This argument is not deemed persuasive because Werner et al teach a diverter or flow guide element substantially as claimed including a solid piece of material having a base with a

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trapezoidal face in a spin pack housing polymer chamber preceding the filter in the direction of flow of polymer in order to provide uniform polymer distribution and prevent stagnation or dead spaces in the chamber (see col. 2, lines 68+ to col. 3, lines 1-7; col. 4, lines 32-37; and col. 5, lines 59-63). Applicant's invention as recited in claim 1 does not require the top half of the diverter or flow guide element to be rectangular in shape.

Applicant contends that the device of Werner et al is used for spinning nylon filaments and not bicomponent formation such that the device of Werner et al would not work as substituted.

This argument is not deemed persuasive because Hills teaches a device for bicomponent formation and Werner et al merely provides supporting evidence that the use of a shaped diverter or flow guide element having trapezoidal base was known in the art at the time the invention was made. It is the Examiner's position that it is within the purview of one skilled in the art to construct and arrange within each chamber of the Hills assembly, a shaped diverter or flow guide element having a trapezoidal face as taught by Werner et al for the purpose of providing uniform polymer distribution and preventing stagnation or dead spaces therein. The substitution would work because the lower portion of the Hills chamber has tapered walls (see areas marked 19 and 20 in Fig. 4) in the area above the filter such that the tapered diverter or flow guide element of Werner et al would fit. Furthermore, the type of product produced by secondary reference, Werner et al, is irrelevant because the primary reference, Hills provides a device capable of producing bicomponent filaments.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura Edwards whose telephone number is (571) 272-1227. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Laura Edwards
Primary Examiner
Art Unit 1734

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December 27, 2004